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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,734	09/29/2000	Jeffery P. Robert	02690.002	2819

27966 7590 05/17/2003

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EXAMINER

FORTUNA, ANA M

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 05/07/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/675,734

Applicant(s)

Robert et al

Examiner

Ana Fortuna

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Feb 12, 2003

2a) ☐ This action is FINAL.

2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-34 is/are pending in the application.

4a) Of the above, claim(s) 10-27 is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1-9 and 28-34 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

4) ☐ Interview Summary (PTO-413) Paper No(s). _____

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

5) ☐ Notice of Informal Patent Application (PTO-152)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

6) ☐ Other: _____

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DETAILED ACTION

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 3, 4, 5, 6, 8, 9, 28-34, are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ladha et al (4,000,065) (hereinafter '065) in view of Potter

(6,036,854)(hereinafter '854) and Potter et al. (5,997,652)(hereinafter '652), and alternatively in view of Miller et al (5,374,356)(hereinafter '356). Reference '065 discloses a system comprising and ultrafiltration membrane connected to an reverse osmosis membrane unit, the reverse osmosis unit treats filtrate from the ultrafiltration unit and produces a clarified stream, the system is used in removing organics from an aqueous contaminated medium or stream (Fig. 2, abstract, column 1, lines 33-49, column 2, lines 40-62, and column 5, lines 43-68, and column 6, lines 1-21).

Reference '065 fails to disclose the system comprising means for producing starch-based potato water, as the source of waste water to be treated by the combination of ultrafiltration and reverse osmosis membranes.

Potter ('854) teaches a system including an ultrafiltration membrane connected to a waste water stream produced in a food processing plant, such as, potato processing plant (column 3, lines 5-15, and column 4, lines 5-65, elements 12, 14, and 16 of Fig. 1). '854 fails to disclose connecting the permeate from the ultrafilter unit to a reverse osmosis membrane. '065 suggests connecting

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an ultrafilter prior to a reverse osmosis membrane to prevent membrane plugging (column 10, lines 31-32). It would have been obvious to one skilled in the art at the time the invention was made to modify the system of Potter ('854) by adding a reverse osmosis membrane to the permeate stream from the ultrafiltration membrane, in order to produce water of higher quality; it would have been also obvious to one skilled in the art at the time the invention was made to use the system of '065 in processing waste water containing organics, e.g. potato starch from a potato processing plant, since ultrafiltration is suggested by Potter, and further posttreatment of the permeate containing dissolved solids from an ultrafiltration membrane is suggested by '065.

Potter et al ('652) further teaches treatment of waste water from a potato processing plant and the system connected to the processing plant and a reverse osmosis membrane to produce a purified stream (84) (Figure 1, elements 12 and 32, abstract, column 3, lines 24-46, column 4, lines 6-30). '652 fails to disclose combining the reverse osmosis membrane with an ultrafiltration membrane as prefilter. Reference '065 teaches combining ultrafiltration membrane with reverse osmosis membranes in a system for treating waste water, e.g. to avoid reverse osmosis plugging. Reference '652 further teaches using ultrafiltration membrane as a first step in a system connected to a potato processing unit, for treating waste water. It would have been therefore obvious to one skilled in the art at the time the invention was made to have a system arranged with an ultrafiltration membrane and reverse osmosis membrane connected to a waste water line from a potato processing plant as suggested by art above. Regarding claims 2, 8, 9, and 29-30, combining more than one reverse osmosis and or ultrafiltration units in series is considered to be

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cumulative, e.g. for producing higher quality product, and it would have been obvious to one skilled in the art at the time the invention was made. As to claims 4-6, 31-33, reference '652 teaches the membrane (RO), as an inorganic membrane, e.g membrane containing a titanium oxide layer (column 6, lines 35-37).

Miller ('356), is further cited as cumulative. Miller teaches combining more than one membrane unit of different molecular weight cut-off in series for treating waste water from a food processing plant, e.g. food slices (potato processing plant (column 1, lines 15-30, and column 2, lines 17-26, 48-56). Therefore, connecting the membrane system having ultrafiltration membrane to a waste water line from a food processing unit, and combining with a prefilter or post filter, e.g. a reverse osmosis unit to produce a higher purified water stream it would have been obvious to one skilled in the art at the time the invention was made.

1.3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,

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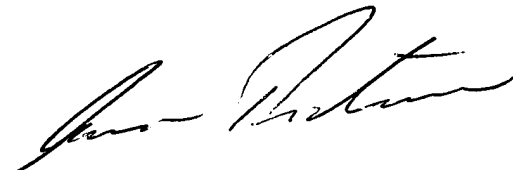
will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

4.. An inquiry concerning this communication or earlier communications from the examiner should be directed to Ana Fortuna whose telephone number is (703) 308-3857. The examiner can normally be reached on Monday-Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached on (703) 308-0457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 for regular responses, and (703)872-9311 for after finals.

Ana Fortuna

May 5, 2003



ANA FORTUNA
PRIMARY EXAMINER